

Australian Bureau of Statistics

1330.0 - Education News, Feb 2012

Previous ISSUE Released at 11:30 AM (CANBERRA TIME) 22/02/2012

Education News - February, 2012

This newsletter highlights the latest curriculum related teaching resources, student activities and statistical tools that have been developed by ABS Education Services as well as other ABS resources that are useful for schools.

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A word from the editor

Just a quick note to introduce myself – my name is Anu Edirisuriya. I'm relatively new to the Education Services Unit, having joined the unit in October 2011. Prior to this I was working on the ABS 2011 Census of Population and Housing. I'm very much looking forward to the exciting and challenging work ahead!

The theme for this edition of EdNews is *CensusAtSchool* to coincide with the launch of our 2012 Questionnaire, now open from 23 January - 6 July. In Classroom Ideas, we have an activity investigating the relationship between height and bellybutton height. Also, take a look at the new and interesting Geography lessons we have added to the ABS website.

We hope you enjoy reading our first edition of EdNews for 2012!

If you have any suggestions for articles or activities that you would like covered in the next edition of EdNews, please don't hesitate to contact me on 1800 623 273.

1. CensusAtSchool 2012 Questionnaire



It's that time of year again! The 2012 CensusAtSchool Questionnaire opened 23rd January and will stay open until 6th July. Last year over 25,000 students from across Australia answered the questionnaire. About 1 in 4 Australian schools participated. Since 2006, more than 200,000 questionnaires have been submitted to the database. This has resulted in an exceptional and unique databank that is accessible to students and teachers for free. We are again encouraging teachers to get their students to participate in

the 2012 Questionnaire to be part of this national community by adding to and accessing CensusAtSchool data.

What is CensusAtSchool?

CensusAtSchool is a nation-wide project that runs annually. The questionnaire is open in terms 1 and 2 every year. Students complete an online questionnaire of 30 questions by entering data such as their height, what they had for breakfast and their opinions on environmental and social issues. The questionnaire is designed to produce both categorical and numerical data on topics that students find interesting. The data is collected in a confidential manner to ensure individual students cannot be identified. For more information you can visit the CensusAtSchool-Australia website at www.abs.gov.au/censusatschool.

Once the questionnaire closes, the 2012 data will be available through the Random Sampler. The data is free to access and available even if your students have not completed the questionnaire. Of course they will be much more engaged if the random sampler includes their responses. At the moment, 2006 - 2011 data is available. The Random Sampler can be found at: www.cas.abs.gov.au/cgi-local/cassampler.pl.

Completing the questionnaire is very easy. Three simple steps:

- 1. Set up a teacher account. This takes about 2 minutes www.cas.abs.gov.au/cgi-local/casr.pl
- 2. Access your teacher account to get student access numbers (SAN). This takes about 1 minute www.cas.abs.gov.au/cgi-local/cast.pl
- 3. Get your students to complete the Questionnaire. This will take approximately 20 minutes www.cas.abs.gov.au/cgi-local/casq.pl

Making connections

Completing the questionnaire and then accessing the data is an engaging way to teach students about statistics and how surveys are conducted. The data is relevant to them and can be used in a variety of ways. There are a growing number of lessons on our homepage that you can access and use for free to help incorporate statistics into your classroom. You can find these lessons by accessing our CensusAtSchool homepage: www.abs.gov.au/censusatschool.

Participating in the CensusAtSchool Questionnaire allows students to be part of a national statistical project, and is an easy way to satisfy some of the General Capabilities outlined in the Australian Curriculum. CensusAtSchool-Australia is part of CensusAtSchool International, and the data is shared with over ten other countries through the international website. You can access the data and compare Australian students to students from around the world. The CensusAtSchool International homepage can be found at: www.censusatschool.com.

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2. CensusAtSchool Teacher Accounts



This time of year is when the CensusAtSchool teacher accounts get used the most. From

last year we have made significant improvements to make the teacher accounts easier for you to use. This is the first year you are able to update your own school details through your account and delete your account.

You need a teacher account to generate Student Access Numbers (SAN) in order for your students to complete the 2012 CensusAtSchool Questionnaire. A teacher account takes only a few minutes to set up. To set up a teacher account, please use the following link: http://www.cas.abs.gov.au/cgi-local/cast.pl You can register a new account at http://www.cas.abs.gov.au/cgi-local/casr.pl

Cancel Update

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3. New Geography Activities

We are very happy to let you know about some new Geography lessons that have been added to the ABS Education Services web pages.

Updates have been made to the most popular Geography activities. They now contain student worksheets, solutions where appropriate and assessment rubrics aligned to the Australian curriculum making them useful as assessment tasks for your classrooms.

The updated activities are:

Geo_03 - Population distribution

Geo 04 - Population density

Geo_05 - Capital cities

Geo 07 - Population structure and drawing of population pyramids

Geo 08 - Interpreting population pyramids.

More Quick Geography activities have also been added. Designed as short introductions to topics or a quick revision activity, these will take only 30 minutes to one lesson to complete. Additions include:

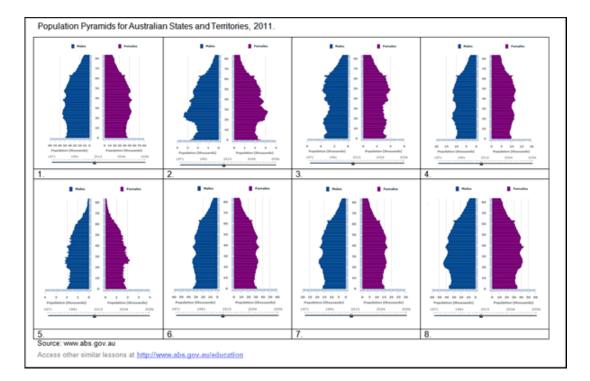
GeoQ 09- Representing Population Distribution

GeoQ 10- Indigenous Population Distribution

GeoQ 11 - Population Pyramids for Australian States and Territories

GeoQ_12- Natural Increase of Population Around Australia.

Have a look at the population pyramids found in Quick Geog 11.



Can you use the shapes of the pyramids to work out which State or Territory each one represents? Quick Geog 11 is an activity based around how each location can produce a population pyramid with its own characteristics. A great activity that will generate lots of conversation in your classroom.

Activities can be found at the under the Classroom Activities heading on <u>Education Services webpages</u>. Enjoy!

We would love to hear <u>feedback</u> from anyone who finds the activity useful or has ideas for improving it.

Do you have a classroom idea that uses ABS data or ABS Education products? Let us know at education@abs.gov.au and we can share it with schools around Australia.

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4. Classroom Ideas: Gingerbread Belly Buttons

For many students multiplicative thinking is a concept that needs help to develop. In this activity students are able to challenge their multiplicative thinking beliefs as they look at the relationship between height and belly button height.

Typical of all our activities students use real data to explore a problem and build their knowledge. This lesson has a teacher notes and solutions as well as a rubric aligned with the Australian curriculum. There are ideas for extending students by completing parts of the investigation using ICT. Aimed primarily at Year 7 students, the activity can easily be modified to suit needs of an individual class or student.

Exploring the Golden Ratio using gingerbread people (CasMa 12.1)

ABS Education Services CaSMa12.1

Student Worksheet



Where will I put my bellybutton?

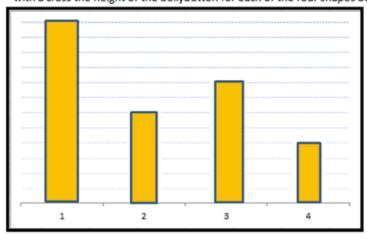


Background

Mae and Mikey have made some gingerbread people of different sizes. They have some icing left over and want to use it to give each a bellybutton. They want to place it accurately onto the body in relation to the overall height of each gingerbread person.

Task One: YOUR ESTIMATION

1. Imagine each of the rectangles below is a person's height. Help Mae and Mikey by showing with a cross the height of the bellybutton for each of the four shapes below:



- 2. Compared to the height how would you describe the bellybutton height? How do you know?
- Does this change as a person's height changes or does it stay the same? Explain.

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5. Conferences



MAV Conference 2011

In December 2011 Jean, Mary-Anne, Andrea, Tanya and Anu attended the Mathematics Association of Victoria's (MAV) Annual Conference, where the theme was 'Maths is Multi-Dimensional'. The team ran a trade stall and Jean and Mary-Anne both ran computer workshops.

Jean took teachers with beginner level Excel skills through accessing authentic data from the CensusAtSchool questionnaire to constructing a variety of graphs and displays using Excel. Teachers were shown how to construct frequency tables using the *countif* function and then used these to construct bar charts, pie graphs and simple picture graphs and dot plots.

Mary-Anne familiarised teachers with the Australian Bureau of Statistics (ABS) Education Services' free website focusing on CensusAtSchool including new material. Teachers looked at the teacher registration process and the 2011 Questionnaire. They learnt how to access CensusAtSchool and Education Services resources, activities and marking rubrics, which are aligned with the Australian Curriculum; as well as datasets and interactive graphs.

A large number of people visited us at our stall and also signed up for our quarterly Education News

publication. Our trade stalls always have lots of free goodies such as posters, stickers and lessons for teachers to take back to the classroom.



Upcoming Conferences:

The Education Services Unit of ABS will have representatives at various conferences over the following months:

May

19 May- Queensland Association of Mathematics Teachers, Townsville

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6. Looking for data about the region you live in?

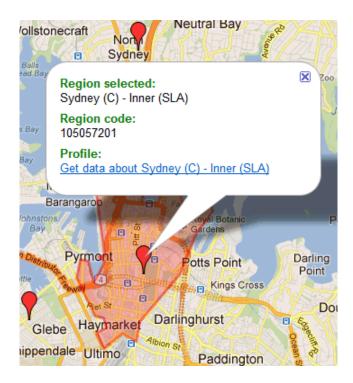
If you would like to learn more about the region where you live or work, the ABS has a great place where you can get started. The National Regional Profile (NRP) is a one-stop-shop that includes selected key data items for small areas of geography – this data is produced by the ABS, as well as some important non-ABS sources. Over 2,000 regions have data available through the NRP, down to Local Government Area and Statistical Local Area boundaries.

The latest issue of the NRP can be found here: http://www.ausstats.abs.gov.au/ausstats/nrpmaps.nsf/NEW+GmapPages/national+regional+profile?opendocument.

It's Easy to Use

The NRP has a Google map interface so you can find your region of interest through familiar features like an address search box, using a map, or by picking a region from lists. The map and lists are interactive – you can toggle between a map/list of Local Government Areas or Statistical Local Areas. You can also do this for larger geographical areas, including all of Australia.

Once you find the region of interest to you, a data profile can be downloaded in a new window. It's very easy to pan, click or zoom to another region.



Find one Region or Compare Many

You might be interested in comparing your region to other regions, or you'd like to find regions with particular characteristics. If so, click on the 'Compare Regions' button on the NRP home page, and follow the instructions on how to use SuperTABLE and .csv files to query and manipulate the regional data. There are also demonstration videos providing further information on how to use SuperTABLE within the NRP.

About the Data

All the data available through the NRP is presented on a common set of geographical boundaries – the Australian Standard Geographical Classification (ASGC), 2008. This makes it easy to see how the characteristics of regions have changed over time.

The following list contains some of the data items available through the NRP:

- · Estimates of unemployment
- · Estimates of personal income
- · Wage and salary earners
- · Estimated Resident Population (ERP)
- Population density
- · Indigenous Estimated Resident Population
- · Various 2006 Census data (e.g. occupation, qualifications)
- · Births and deaths
- · Motor vehicle census
- · Agricultural commodities
- · Land area

Where to find the NRP

You can access the NRP directly from the ABS home page (on the left hand column under *Regional Statistics*) or from the link above.

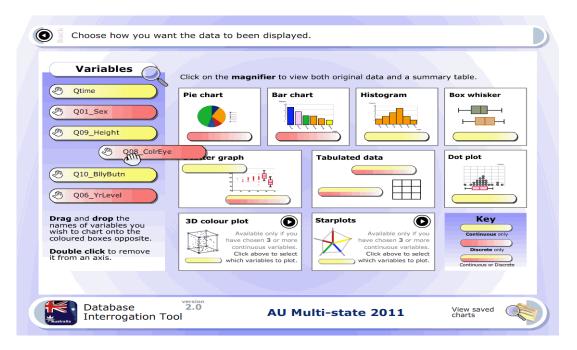


7. CensusAtSchool International News

2011 Data now loaded into the International Random Data selector and DataTool

CensusAtSchool-Australia 2011 data is now in the International random data selector (RDS) and the new DataTool (DT BETA 2012). The international RDS allows you to access raw CensusAtSchool data from participating countries. You can compare Australian students' responses to other CensusAtSchool countries in the RDS such as Canada, Ireland, New Zealand, South Africa or United Kingdom. The international DataTool creates simple graphs, using CensusAtSchool data, by dragging and dropping variables. It's colourful, simple and is great for activities that do not require students to interact directly with the data.

Link to the CensusAtSchool international data page: http://www.censusatschool.com/en/international-database.



Namibia becomes the 10th country to run CensusAtSchool

At the beginning of October, Kate Richards and Neville Davies from CensusAtSchool International spent a busy four days in Windhoek, Namibia, explaining a strategy for planning, writing and running the *CensusAtSchool* project in Namibian schools. The visit was hosted by Medmillian Handura, founder of Oupatje, a not-for-profit organisation that will run *CensusAtSchool* Namibia. Kate and Neville ran a workshop for 16 school teachers, appeared on Namibian television, met the director general of education and a senior Namibian economist and visited Academia Secondary School.



At the workshop the teachers were introduced to the following topics, essential for participating in the project:

- the International CensusAtSchool Project;
- motivating learners with collecting meaningful data;
- recording and uploading data to web forms;

- encouraging learners to learn from data;
- · downloading samples of data for classroom learning;
- creating a CensusAtSchool Namibia questionnaire.



Written feedback from the participants included:

- well structured and user friendly;
- powerful tool for encouraging the learning of statistics;
- very relevant, interesting and informative;
- a well educating workshop! Thank you!;
- I am keen to get involved! Very excited indeed.

In the next 3 or 4 months a pilot project will be run in 10-15 schools and champions for the project established. There will be a range of workshops offered for teachers to find out about *CensusAtSchool* and the benefits it can bring for improving the statistical literacy of learners and teachers.

It is likely that a design and delivery committee will be set up to oversee the pilot and it will involve teachers and learners in the design and content of the questionnaire that will be administered to Namibian schools, first in the pilot and subsequently in the full roll-out later next year.

The other countries that are running *CensusAtSchool* are: the UK, South Africa, Australia, New Zealand, Canada, Ireland, Japan, United States and South Korea.

Extracted from the Royal Statistical Society Centre for Statistical Education http://www.rsscse.org.uk/newsandfeatures/rsscsenews/351-namibia

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8. Recently Released Publications

Demography News, 2012 (cat # 3106.0)

Demographic statistics provide measures of the Australian population, its size, growth, composition and geographic distribution, as well as the components that shape population change: births, deaths and migration.

Prisoners In Australia, 2011 (cat # 4517.0)

Contains national information on prisoners who were in custody on 30 June each year. The statistics are derived from information collected by the ABS from corrective services agencies in each state and territory.

Arts and Culture in Australia: A Statistical Overview, 2011 (cat # 4172.0)

This publication provides a statistical overview of culture in Australia.

Australian Social Trends, Dec 2011 (cat # 4102.0)

Released quarterly, Australian Social Trends presents analysis and commentary on a wide range of social issues. The December edition contains articles on components of wealth, international students and 50 years of labour statistics: now and then.

Voluntary Work, Australia 2010 (cat # 4441.0)

This publication provides data about the participation in unpaid voluntary work through an organisation or group. It includes information on volunteering rates, character data on volunteers as well as information relating to aspects of the voluntary work undertaken.

Australian Labour Market Statistics, Jan 2012 (cat # 6105.0)

This publication provides a broad level summary of key labour market measures, contains analyses of labour market issues, and resources on how to understand and interpret labour market statistics.

Remember, all ABS publications are free to download from the ABS website.

You can view the full range of previously released publications from the ABS under **Previous** Releases.

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9. Contact Details

How to contact ABS Education Services

Free Call: 1800 623 273

Email: <u>education@abs.gov.au</u>

Mail: GPO Box 2796 Melbourne, 3001

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This page last updated 1 May 2012

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